

REMARKS

I. Formal Matters.

Claims 1-8 and 23-29 are all the claims pending in the application. Claims 2, 8, 23-26, and 29 are withdrawn. Applicant thanks the Examiner for indicating that the drawings filed on January 6, 2004, are acceptable.

II. Claims.

The Examiner rejects claims 1 and 4-6 under 35 U.S.C. §102(e) as being allegedly anticipated by *Burroughes, et al.* (U.S. Patent No. 6,592,969).

Independent claim 1. *Burroughes* discloses a flexible composite of substrate layer 4 disposed on a plastic layer 2, a first transparent or substantially transparent first electrode layer 6 overlying the substrate 4, and at least one layer of electrically active organic material 8 overlying the first electrode 6 (*Burroughes*, col. 4, lines 27-35; Fig. 1). Further, while the electrically active layer 8 maybe a thin film transistor array, photodetector or solar cell (*Burroughes*, col. 4, lines 40-45), the first layer 6 is indium tin oxide (col. 6, lines 14 and 50). The indium tin oxide layer is disposed on the substrate and is a *passively* electrically conducting layer (*Burroughes*, Fig. 1; col. 4, lines 27-35). *Burroughes* discloses disposing a passively conductive metal oxide layer upon the substrate and then an electrically active layer atop the metal oxide layer (*Burroughes*, col. 4, lines 27-35; Fig. 1).

In contrast, claim 1 requires, “ . . . an electrically active thin film device layer disposed directly on the substrate.” *Burroughes* fails to disclose an electrically active layer disposed directly on the substrate. At least for this deficiency, the rejection of claim 1 as being anticipated by *Burroughes* under 35 U.S.C. §102(e), should be withdrawn.

Claims 4-6 are asserted as being allowable at least by virtue of their dependence upon an allowable claim.

Claims 3 and 27 are rejected as being allegedly unpatentable over *Burroughes* in view of *Weaver et al.* (U.S. Patent App. No. 2004/0079945) under 35 U.S.C. §103(a).

Claims 3 and 27 are asserted as being allowable at least by virtue of their dependence upon an allowable claim.

Claims 7 and 28 are rejected as being allegedly unpatentable over *Burroughes* in view of *Ishida* (U.S. Patent No. 4,661,428) under 35 U.S.C. §103(a).

Claims 7 and 28. The Examiner acknowledges that *Burroughes* fails to disclose a flexible film having a thermal conductivity higher than 0.01 W/cm·deg. Therein, the Examiner relies on a combination of primary reference *Burroughes*, the subject specification, and secondary reference *Ishida* to provide this deficiency. Specifically, the Examiner cites to *Burroughes* for disclosure of a flexible film made of plastic (OA page 4; *Burroughes* col. 6, line 11) in combination with the subject specification, which teaches a copper film having a thermal conductivity of 0.04 W/cm·deg (which is greater than 0.01 W/cm·deg) (OA page 4; *Application* page 11, second complete paragraph). Subsequently, the Examiner asserts that *Ishida* teaches that a flexible film can be made from either copper or plastic (OA page 4; *Ishida* col. 4, lines 51-56). Finally the Examiner asserts in view of the alleged teachings above, it follows that substitution of a copper film for a plastic film would be obvious to one of ordinary skill in the art (OA page 4).

Claims 7 and 28 require, “. . . a substrate disposed on the flexible film . . . the flexible film having a thermal conductivity higher than 0.01 W/cm·deg.” (claim 28). *Ishida* teaches an

electrically conductive substrate 11 can made of a conductive metal, or alternatively, a plastic film, that is coated with a metal oxide (col. 4, lines 51-59; Figs. 2 and 4). *Ishida* specifically teaches a metal or metal oxide substrate for *electrical* conduction, and fails to teach or suggest the subject matter of *thermal* conduction.

The Examiner asserts that *Ishida* teaches copper *or* plastic can be used as a flexible film. However, *Ishida* teaches that copper or plastic *coated with a metal* or metal oxide by sputtering can be used as an electrically conductive substrate. *Ishida* does not teach that copper and plastic are equivalents or that both are suitable flexible films. Further, *Ishida* makes no reference to the thermal conductivity properties of these materials. The Examiner asserts that copper and plastic are recognized as equivalents in the art (OA page 4). Equivalents for what purpose? *Ishida* fails to teach or suggest an equivalence between the two materials and specifically teaches a means to compensate for the difference in electrical conductivity between copper and plastic.

The electrically conductive substrate 11 taught by *Ishida* would not be recognized as an equivalent of the plastic layer 2 taught by *Burroughes* (*Ishida* Figs. 2 and 4; col. 4, lines 51-59; *Burroughes* Fig. 1; col. 6, lines 46-50). *Burroughes* teaches away from a copper flexible film, by specifically teaching that optical properties maybe incorporated into the plastic layer; copper cannot provide the optical properties taught by *Burroughes* (*Burroughes* col. 5, lines 29-35). *Burroughes* teaches away from substituting a copper layer for the plastic layer, and fails to teach or suggest consideration of thermal conductivity properties of either material. Secondary reference *Ishida*, alone or in combination with the subject specification, fails to compensate for the deficiency in *Burroughes*.

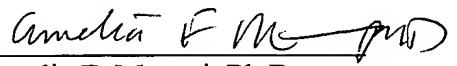
Burroughes and *Ishida*, alone or in combination, fail to teach or suggest a flexible film disposed upon a substrate *having a thermal conductivity higher than 0.01 W/cm·deg.* At least for this deficiency the rejection of claims 7 and 28 as being unpatentable over *Burroughes* in view of *Ishida* under 35 U.S.C. §103(a), should be withdrawn.

New claim 30 is claim 7 in independent form, incorporating the subject matter of previously presented claim 1 and believed to be patentable on the grounds discussed above in traversal of the rejection of claim 7.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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